

ABSTRACT OF THE DISCLOSURE

A process is disclosed for producing a high temperature stable fiber composite ceramic by chemical vapor infiltration (CVI) with a silicon carbide precursor in a suitable carrier gas on carbon fiber preforms or silicon carbide fiber preforms. This process is characterized by the use of a process pressure of  $\geq 0.6$  bar absolute and a process temperature of  $\geq 1100^{\circ}\text{C}$ . Also disclosed are structural component parts, particularly for aircraft and spacecraft engineering, which are commonly exposed to high thermal and mechanical loading and which have been produced by the above process.